

## CLAIMS

VACCINE COMPOSITION CONTAINING TRANSFORMING GROWTH FACTOR ALPHA (TGF $\alpha$ ). IT USE IN MALIGNANT DISEASES THERAPY.

- 1 - Vaccine composition containing self-TGF $\alpha$  or any derived or its combination with other EGF-R ligands, coupled with any carrier protein genetically or by chemical conjugation that contains an adjuvant, able to produce a specific immune response against the self-TGF $\alpha$ .
- 2 - Vaccine composition according to claim1 containing recombinant human TGF $\alpha$ .
- 3 - Vaccine composition according to claim1 wherein the carrier protein used is P64k.
- 4 - Vaccine composition according to claim1 that contains a recombinant fusion protein between TGF $\alpha$  and P64k cloned in any expression vector system such as: mammalian cells, bacteria or yeast.
- 5 - Vaccine composition according to claim1 that contains a recombinant fusion protein between TGF $\alpha$  and P64k cloned in a expression vector of bacteria and expressed in E.coli.
- 6 - Vaccine composition according to claim1 that contains a recombinant fusion protein between hTGF $\alpha$  and P64k cloned in a expression vector of bacteria that presents a genetic sequence coding for six histidines in the N-terminal end of P64k and expressed in E.coli.
- 7 - Vaccine composition according to claim1 that contains a chemical conjugated between TGF $\alpha$  and P64k.
- 8 - Vaccine composition according to claim1 that contains TGF $\alpha$ , EGF and P64k coupled by a chemical method.
- 9 - Vaccine composition according to claim1 that contains TGF $\alpha$ , EGF and P64k in a recombinant fusion protein cloned in a expression vector of bacteria and expressed in E.coli.
- 10 - Vaccine composition that represents the mix of two vaccine preparations containing the chemical conjugated between P64k and TGF $\alpha$  or EGF respectively in the moment of the injection
- 11 - Vaccine composition that represents the mix of two vaccine preparations containing fusion proteins between the P64k and TGF $\alpha$  or EGF respectively in the moment of injection.
- 12 - Vaccine composition according to claim1 wherein the adjuvant is incomplete adjuvant of Freund.
- 13 - Vaccine composition according to claim1 wherein the adjuvant is Al(OH)<sub>3</sub>.
- 14 - Immunization method with a vaccine composition according to claim 1 to 13, able to achieve specific antibodies against hTGF $\alpha$ .
- 15 - Treatment method according to claim 14, able to generate anti- hTGF $\alpha$  antibodies, capable of avoid the TGF $\alpha$  bind to its receptor in an in vitro experiment.
- 16 - Treatment method according to claim 14, able to generate anti-hEGF antibodies.
- 17 - Treatment method according to claim 14, able to generate anti- hTGF $\alpha$  antibodies, able of recognize TGF $\alpha$  in human tumor biopsies.
- 18 - Method of treatment of malignant diseases, such as epidermoide breast carcinomas, prostate, gastric, ovary epithelial cancer that express TGF $\alpha$  and other ligands of EGF-R, such as EGF, with a vaccine composition according to claims 1 to 13.